In the Specification:

Please amend the specification as shown:

Please delete paragraph **[0065]** and replace it with the following paragraph:

[0065] Figure 2 is a photograph of the gel representing the quantitative course of the cleavage of the modified oligonucleotide, wherein from left to right:
1. 5'-TTG ACG GTA TAT CT-3' **(SEQ ID NO: 3)** (14mer control) + dye (XC + BP);
2. 5'-AGC CCT TAC T-3' **(SEQ ID NO: 2)** (10mer control);
3. Model oligonucleotide 5'-AGC CCT TAC TTT GAC GGT ATA TCT-3' **(SEQ ID NO: 1 or 4)**;
4. Empty;
5. Model oligonucleotide (unmodified);
6. Cleavage reaction;
7. Cleavage reaction;
8. Model oligonucleotide (unmodified);
9. Cleavage reaction;
10. Cleavage reaction;
11. Model oligonucleotide (modified P-S bond);
12. Cleavage reaction;
13. Cleavage reaction;
14. Model oligonucleotide (modified P-S bond);
15. Cleavage reaction; and
16. Cleavage reaction.

Please delete paragraph **[0248]** and replace it with the following paragraph:

[0248] Example 2:

Synthesis of a model oligonucleotide 5´-AGC CCT TAC TTT GAC GGT ATA TCT-3' **(SEQ ID NO: 1 or 4)**

Please delete paragraph **[0256]** and replace it with the following paragraph:

[0256] 15 μl of a 50 mM silver nitrate solution are added to 1 O.D. of the model oligonucleotide and the solution is allowed to stand for 1 h at room temperature. The reaction is quenched by adding 4 μl of a 220 mM DTT solution. After 1 h, the sample is centrifuged and the solution is removed. HPL chromatography and gel electrophoresis (15% TBE/urea gel, 1.0 mm x 15 well, 250 V, 90 min) follows for analytical purposes. The fragments formed during the cleavage

5´-AGC CCT TAC T-3´ **(SEQ ID NO: 2)** (10mer)

5`-HO-TT GAC GGT ATA TCT-3´**(SEQ ID NO: 3)** (14mer)

and the unmodified oligonucleotide

5´-AGC CCT TAC TTT GAC GGT ATA TCT-3´ **(SEQ ID NO: 1 or 4)**

are used as controls.

Please delete paragraph **[0260]** and replace it with the following paragraph:

[0260] The retention times of the oligonucleotides are summarised in the following Table:

5´-TTG ACG GTA TAT CT-3´ **(SEQ ID NO: 3)**	24.26 min

5´- AGC CCT TAC T-3´ **(SEQ ID NO: 2)**	23.22 min
5´-AGC CCT TAC TTT GAC GGT ATA TCT-3´ **(SEQ ID NO: 1 or 4)**	28.42 min
Cleavage reaction carried out	23.49 min; 24.65 min

Please delete paragraph **[0262]** and replace it with the following paragraph:

[0262] As a further analytical procedure, a measurement was run on a Biacore device (Uppsala, Sweden) in order to indicate that the cleavage is possible also on a solid phase. The following oligonucleotide was synthesised for these measurements:
5´-biotin-AGC CCT TAC TTT GAC GGT ATA TCT-3´ **(SEQ ID NO: 1 or 4)**

Please delete paragraph **[0263]** and replace it with the following paragraph:

[0263] The 5´-end of the oligonucleotide was biotinylated (Glen Research, Sterling, Virginia, USA). The synthesis of the oligonucleotide is performed as described in Example 2. Further modification at the 5´-end was carried out on an Applied Biosystem 394 synthesizer. For the synthesis, a standard cycle was applied whose coupling time was extended to 300 s. Purification and processing also took place as described in Example 2. Moreover, three oligonucleotides were synthesised for the measurements, which exhibit different complementary regions with the modified model oligonucleotide. These three compounds, which were synthesised and purified according to standard conditions, are as follows:

1. 5´-GCA GCT AGA TAT ACC GTC AA-3´ **(SEQ ID NO: 5)**

2. 5´-GCT AGA TAT ACC GTC AAA GT-3´ **(SEQ ID NO: 6)**

3. 5´-GAT ATA CCG TCA AAG TAA GG-3´ **(SEQ ID NO: 7)**

5´-AGC CCT TAC TTT GAC GGT ATA TCT-3´ **(SEQ ID NO: 1 or 4)**

(1.) 3´-AA CTG CCA TAT AGA TCG ACG-5´ **(SEQ ID NO: 5)**

(2.) 3´-TG AAA CTG CCA TAT AGA TCG-5´**(SEQ ID NO: 6)**

(3.) 3´-GGA ATG AAA CTG CCA TAT AG-~~3~~5´ **(SEQ ID NO: 7)**

Please delete paragraph **[0266]** and replace it with the following paragraph:

[0266] For binding to a chip, the following oligonucleotides were synthesised:

5´-amino-AGC CCT TAC TTT GAC GGT ATA TCT-3´**(SEQ ID NO: 1 or 4)**

5´-amino-AGC CCT TAC TTT GAC GGT ATA TCT-3´ **(SEQ ID NO: 1 or 4)** (control sequence)

Please delete paragraph **[0299]** and replace it with the following paragraph:

[0299] After determining the probe sequence, these are produced synthetically as illustrated e.g. in Example 2. The sequences of the probes are indicated in the following Table.

1	TCTAAAACCTGGCCAGCAATCATTC **(SEQ ID NO: 8)**	3'Cy3	5'NH2	phosphothioate
2	GCCCGGGCATTTCTCTCATTAACAT **(SEQ ID NO: 9)**	3'Cy3	5'NH2	phosphothioate
3	TTCGAAAAGATTGCCTCCACATCAG **(SEQ ID NO: 10)**	3'Cy3	5'NH2	phosphothioate
4	GTCTCATCTTTCTTCACGGAGCTGC **(SEQ ID NO: 11)**	3'Cy3	5'NH2	phosphothioate
5	TGCTTGTTTGCTCTGTTCCTTTTCA **(SEQ ID NO: 12)**	3'Cy3	5'NH2	phosphothioate
6	TCCAGGTTTTCCAGGAGAGAATCCA **(SEQ ID NO: 13)**	3'Cy3	5'NH2	phosphothioate
7	TCTGGGTCAGCTCCTTCTTAATGGC **(SEQ ID NO: 14)**	3'Cy3	5'NH2	phosphothioate
8	TCTAGAGGATGCATTTGACATGCCA **(SEQ ID NO: 15)**	3'Cy3	5'NH2	phosphothioate
9	TGTTACATTTGTGTTGAACTGCCCC **(SEQ ID NO: 16)**	3'Cy3	5'NH2	phosphothioate
10	AATGAGATTGCCTTTGCAGTTAGGG **(SEQ ID NO: 17)**	3'Cy3	5'NH2	phosphothioate
11	TTCTTTTGCCCTAGCTCCAAGTTCA **(SEQ ID NO: 18)**	3'Cy3	5'NH2	phosphothioate
12	TCGTCCAACAAATACTTTGCGATCA **(SEQ ID NO: 19)**	3'Cy3	5'NH2	phosphothioate
13	AATAGCTCTTTCAGCTGCTTCCTGC **(SEQ ID NO: 20)**	3'Cy3	5'NH2	phosphothioate
14	TACAAATCCATAGCCCTTGGAACCA **(SEQ ID NO: 21)**	3'Cy3	5'NH2	phospho-thioate
15	TATGTTGCCTACTCCACTTTTGCGA **(SEQ ID NO: 22)**	3'Cy3	5'NH2	phospho-thioate
16	TGTTCAAATTTGCGCTTAAGTTCCG **(SEQ ID NO: 23)**	3'Cy3	5'NH2	phospho-thioate

17	TTTGTTTTCCATTGAGCTCCTTTCC **(SEQ ID NO: 24)**	3'Cy3	5'NH2 phospho-thioate
18	TTACTTTCACACTTAAGGCAGGCCC **(SEQ ID NO: 25)**	3'Cy3	5'NH2 phospho-thioate
19	GACATGACTCGTGGAACCTGTGAAG **(SEQ ID NO: 26)**	3'Cy3	5'NH2 phospho-thioate
20	TAAATGGTGGTCTAGGAGCAGCTGG **(SEQ ID NO: 27)**	3'Cy3	5'NH2 phospho-thioate
21	TTGGCTAGGAGGATAGTATGCAGCA **(SEQ ID NO: 28)**	3'Cy3	5'NH2 phospho-thioate
22	AACACAGCGTGTTGCTAACACATCA **(SEQ ID NO: 29)**	3'Cy3	5'NH2 phospho-thioate
23	CTGTCCGCACCGTTCCACAGTATAA **(SEQ ID NO: 30)**	3'Cy3	5'NH2 phospho-thioate
24	CAGCAACATCTTAATGCACAGCCAC **(SEQ ID NO: 31)**	3'Cy3	5'NH2 phospho-thioate
25	AAGTTACAATGCAACAGCCTGCTGT **(SEQ ID NO: 32)**	3'Cy3	5'NH2 phospho-thioate
26	TCTAAAACCTGGCCAGCAATCATTCTGCCA **(SEQ ID NO: 33)**	3'Cy3	5'NH2 phospho-thioate
27	CTCTCCTGCTACAGCAGCCCGGGCATTTCT **(SEQ ID NO: 34)**	3'Cy3	5'NH2 phospho-thioate
28	CGAAGGCAAAGCCCTTATGAACAGAGCAGC **(SEQ ID NO: 35)**	3'Cy3	5'NH2 phospho-thioate
29	TCCCAATGAATACACGGGAGTTCATGGAGC **(SEQ ID NO: 36)**	3'Cy3	5'NH2 phospho-thioate
30	GGATCTGTCTTGTTGGTAACGTTGCTGGCC **(SEQ ID NO: 37)**	3'Cy3	5'NH2 phospho-thioate
31	TCATCTTTCTTCACGGAGCTGCTGCTCTGC **(SEQ ID NO: 38)**	3'Cy3	5'NH2 phospho-thioate
32	TGGGTCAGCTCCTTCTTAATGGCCTGAAGG **(SEQ ID NO: 39)**	3'Cy3	5'NH2 phospho-thioate

33	AGAATTGAAGCCACTTTTGCCCCTTCGTGA (SEQ ID NO: 40)	3'Cy3	5'NH2	phospho-thioate
34	TACATTTGTGTTGAACTGCCCCACACAGCA (SEQ ID NO: 41)	3'Cy3	5'NH2	phospho-thioate
35	TCAAAGGAAGTGAAAATGGGACTAGGCGCG (SEQ ID NO: 42)	3'Cy3	5'NH2	Phospho-thioate
36	ATGTGCTTAAGAGTCATCCTCGCCATTGGC (SEQ ID NO: 43)	3'Cy3	5'NH2	phospho-thioate
37	AGCTCTTTCAGCTGCTTCCTGCGTCTCAAA (SEQ ID NO: 44)	3'Cy3	5'NH2	phospho-thioate
38	ACTCCACTTTTGCGAAGTGATGGATCACGC (SEQ ID NO: 45)	3'Cy3	5'NH2	phospho-thioate
39	GAGACCACATGATGCGTACTGGCTTGCCCT (SEQ ID NO: 46)	3'Cy3	5'NH2	phospho-thioate
40	TCAAAATTCATGGTGTCCAAAGCACGCTCC (SEQ ID NO: 47)	3'Cy3	5'NH2	phospho-thioate
41	GCCGGCTGCTGGAAGTTCACATACGCGTAG (SEQ ID NO: 48)	3'Cy3	5'NH2	phospho-thioate
42	TTCAAATTTGCGCTTAAGTTCCGTCTGCCG (SEQ ID NO: 49)	3'Cy3	5'NH2	phospho-thioate
43	TTGAGCTCCTTTCCGTTCATCTCATCCACA (SEQ ID NO: 50)	3'Cy3	5'NH2	phospho-thioate
44	AAGGCGCTCATCATCCATGTCTTCTCCAAA (SEQ ID NO: 51)	3'Cy3	5'NH2	phospho-thioate
45	CATGACTCGTGGAACCTGTGAAGAAGCTGG (SEQ ID NO: 52)	3'Cy3	5'NH2	phospho-thioate
46	ACTAAATGGTGGTCTAGGAGCAGCTGGGCG (SEQ ID NO: 53)	3'Cy3	5'NH2	phospho-thioate
47	AGCACCGGGCATATTTTGGAATGGATGAGG (SEQ ID NO: 54)	3'Cy3	5'NH2	phospho-thioate
48	ACCCTGAGCAGTCCAGCGAGGACTTGGTCT (SEQ ID NO: 55)	3'Cy3	5'NH2	phospho-thioate

49	CTACTCCTGCTGTCCGCACCGTTCCACAGT **(SEQ ID NO: 56)**	3'Cy3	5'NH2	phospho-thioate
50	TGCAGGAGTTCGCAATCCTCAGCAACATCT **(SEQ ID NO: 57)**	3'Cy3	5'NH2	phospho-thioate
51	TGCACAGCCACAAGTTACAATGCAACAGCC **(SEQ ID NO: 58)**	3'Cy3	5'NH2	phospho-thioate
52	TCAGGAACCTTTGACTGCTTCCATGTTGGC **(SEQ ID NO: 59)**	3'Cy3	5'NH2	phospho-thioate
53	CCTCTGCAGACTACTATTAC **(SEQ ID NO: 60)**	3'Cy3	5'NH2	
54	CCTCTGCAGACTACTATTAC **(SEQ ID NO: 60)**		5'NH2	
55	CCTCTGCAGACTACTATTAC **(SEQ ID NO: 60)**	3'Cy3	5'NH2	phospho-thioate

b) Production of the array

Please delete paragraph **[0303]**and replace it with the following paragraph:

[0303] Eight in vitro RNAs with the following sequence segments are used:

RNA 1: **(SEQ ID NO: 61)**

5'ucuagaaauaauuuuguuuaacuuuaagaaggagauauacauaugaaccccagugccccag
cuaccccauggccucgcucuacgugggggaccuccaccccgacgugaccgaggcgaugcucuac
gagaaguucagcccggccgggcccauccucuccauccgggucugcagggacaugaucacccgcc
gcuccuugggcuacgcguaugugaacuuccagcagccggcggacgcggagcgugcuuuggacac
caugaauuuugauguuauaaagggcaagccaguacgcaucaugguggucucagcgugauccauca
cuucgcaaaaguggaguaggcaacauauucauuaaaaaucuggacaaauccauugauaauaaag
cacuguaugauacauuuucugcuuuugguaacauccuuucauguaaggugguuugugaugaaaa
ugguuccaagggcuauggauuuguacacuuugagacgcaggaagcagcugaaagagcuauugaa

aaaaugaauggaaugcuccuaaaugaucgcaaaguauuuguuggacgauuuaagucucguaaag
aacgagaagcugaacuuggagcuagggcaaaagaauuc3'

RNA 2: **(SEQ ID NO: 62)**

5'aacugcuuucugggcagccucuuuagcuuggugggcuuguaguacagcuacagcuucaucaa
ccuuagaacggagugacucuggagacucgagcauaugaagaaguucugaauuaucaaucuccaa
caacaugccagugauuuuaccagcaagaguagggugcauggcuugaauaagaggaaacagccgu
ucacccaacauuugcuuuugcucuugaggaggggcagaugccaacauggaagcagucaaagguu
ccugaccuuguacaugaacagcaggcuguugcauuguaacuuguggcugugcauuaagauguug
cugaggauugcgaacuccugcagcauauuuauacuguggaacggugcggacagcaggaguagcu
gcagcggcugcagcugcaggacguggacccauugucuguguugauguguuagcaacacgcugug
uug3'

RNA 3: **(SEQ ID NO: 63)**

5'ucuagaaaaauaauuaguguuauagucuuaagauuuguuuucuaaaguug
auacuguggguuauuuuugugaacagccugauguuuggaccuuuuuuccuc
aaaauaaacaaguccuuauuaaaccaggaauuuggagaaaaaaaaaaggaauuc3'

RNA 4: **(SEQ ID NO: 64)**

5'gaauuccaaacccgggaguaggagacucagaaucgaaucucuucucccucccccuucuuguga
gauuuuuuugaucuucagcuacauuuucggcuuugugagaaaccuuaccaucaaacacgauggc
cagcaacguuaccaacaagacagauccucgcuccaugaacucccguguauucauugggaaucuc
aacacucuuguggucaagaaaucugauguggaggcaaucuuuucgaaguauggcaaaauugugg
gcugcucuguucauaagggcuuugccuucguucaguauguuaaugagagaaaugcccgggcugc
uguagcaggagaggauggcagaaugauugcuggccaggguuuuagauauuaaccuggcugcag3'

RNA 5: **(SEQ ID NO: 65)**

5'gaauucaccaauguuuacaucaagaauuuuggagaagacauggaugaugagcgccuuaagga
ucucuuuggcaaguuugggccugccuuaagugugaaaguaaugacugaugaaaguggaaaaucc
aaaggauuuggauuuguaagcuuugaaaggcaugaagaugcacagaaagcuguggaugagauga
acggaaaggagcucaauggaaaacaaauuuauguuggucgagcucagaaaaagguggaacggca
gacggaacuuaagcgcaaauuugaacagaugaaacaagauaggaucaccagauaccaggguguu

aaucuuuaugugaaaaaucuugaugaugguauugaugaugaacgucuccggaaagaguuuucuc
cauuugguacaaucacuag3'

RNA 6: **(SEQ ID NO: 66)**

5'agugcaaagguuaugauggaggguggucgcagcaaaggguuugguuuuguauguuucuccuc
cccagaagaagccacuaaagcaguuacagaaaugaacgguagaauuuguggccacaaagccauug
uauguagcuuuagcucagcgcaaagaagagcgccaggcucaccucacuaaccaguauaugcaga
gaauggcaaguguacgagcuguucccaacccuguaaucaaccccuaccagccagcaccuccuuc
agguuacuucauggcagcuaucccacagacucagaaccgugcugcauacuauccuccuagccaa
auugcucaacuaagaccaaguccucgcuggacugcucagggugccagaccucauccauuccaaa
auaugcccggugcuauccgcccagcugcuccuagaccaccauuuaguacuaugagaccagcuuc
uucacagguuccacgagucauguc3'

RNA 7: **(SEQ ID NO: 67)**

5'cugcagcggagauguacggcuccucuuuugacuuggacuaugacuuucaacgggacuauuau
gauaggauguacaguuacccagcacguguaccuccuccuccuccuauugcucgggcuguagugc
ccucgaaacgucagcguguaucaggaaacacuucacgaaggggcaaaaguggcuucaauucuaa
gaguggacagcggggaucuuccaagucuggaaaguugaaaggagaugaccuucaggccauuaag
aaggagcugacccagauaaaacaaaaaguggauucucuccuggaaaaccuggaaaaaauugaaa
aggaacagagcaaacaagcaguagagaugaagaaugauaagucagaagaggagcagagcagcag
cuccgugaagaaagaugagacuaaugugaagauggagucugagggggugcagaugacucugcu
gaggaggggaccuacuggaugaugaugauaaugaagaucgggggggaugaccagcug3'

RNA 8: **(SEQ ID NO: 68)**

5'cagcuggaguugaucaaggaugaugaaaaagaggcugaggaaggagaggaugacagagacag
cgccaauggcgaggaugacucuuaagcacauagugggguuuagaaaucuuaucccauuauuucu
uuaccuaggcgcuugucuaagaucaaauuuuucaccagauccucucccuaguaucuucagcac
augcucacuguucucccccauccuuguccuucccauguucauuaauucauauugccccgcgccua
gucccauuuucacuuccuuugacgcuccuaguaguuuuguuaagucuuacccugaaauuuuugc
uuuuaauuuugauaccucuuuaugacuuaacaauaaaaaggauguaugguuuuuaucaacuguc
uccaaaauaaucucuuguuaugcagggaguacaguucuuuucauucauacauaaguucaguagu
ugcuucccuaacugcaaaggcaaucucauuuaguugaguagcucuugaaagcagcuuugaguua

gaaguaugugugguuacacccucacauuagugugcugugugggcaguucaacacaaauguaaca auuauuuuugugaaugagaguuggcaugucaaaugcauccucuaga3'

e) Hybridisation of RNA

Please delete paragraph **[0312]** and replace it with the following paragraph:

[0312] On a four inch Borofloat wafer (PEG surface) modified with hydroxyl groups, the sequence (3'→5') TCT-ATA-TGG-CAG **(SEQ ID NO: 69)** was synthesised on an OligoPilotII (Pharmacia) by the standard phosphoramidite method while retaining the last DMT protective group. This was then removed at defined positions by deprotecting by means of a 128 μm mask (4 channels per chip). Subsequently, a dT amidite (DMT-ON) was coupled to the sites which had then become accessible for synthesis. Subsequently, the same 128 μm mask was used for again deprotection; however, its position was shifted by 256 μm in comparison with the first mask deprotection.

Please delete paragraph **[0314]** and replace it with the following paragraph:

[0314] To couple the cleavable 5'-(S-dimethoxytrityl)-mercapto-5'-deoxythymidine-3'-phosphoramidite (0,1 M solution), standard coupling protocols of the 1 μmol scale were modified: coupling time: 900 s, deblocking: 250 s, rinsing: 600 s with a 220 mM DTT solution in THF/pyridine/water (7/1/2). Subsequently, a dT-amidite was coupled, followed by the remaining sequence (3'→5') CAT-TCC-CGA **(SEQ ID NO: 70)** (deblocking, capping and oxidation corresponding to the standard protocol, 0.2 μmole scale). A solution with a lower iodine concentration (0.02 M iodine, Roth) was used for the oxidation step. To remove the base protective

groups, the arrays were subsequently treated in 30-33% ammonia (Roth) for 35 min at 55°C.

Hybridisation